$$\frac{d^2e_b}{dt^2} + \omega_0^2 e_b = \omega_0^2 E_b - \left(2\alpha \frac{de_b}{dt} + \omega_0^2 M \frac{di_k}{dt}\right), \qquad (5)$$

where

$$\omega_0^2 = \frac{1}{\sqrt{LC}}; \quad \alpha = \frac{R}{2L};$$

i_k can be determined from (4); $M < 0$. It is further assumed that R is very small, and therefore the respective term of second Eq. (3) is ignored. The following relation is thus established:

$$L(E_b - e_b) = M(E_k - e_k), \qquad (6)$$

which permits rewriting the differential Eq. (5) in one unknown e only:

$$\frac{d^2e_b}{dt^2} + \omega_0^2 e_b = \omega_0^2 E_b - \left(2\alpha + \omega_0^2 M \frac{df_1}{de_b}\right)\frac{de_b}{dt}, \qquad (7)$$

here:

$$f_1 = i_a\left[e_b, E_a - \frac{L}{M}(E_b - e_b)\right] \qquad (8)$$

Equation (7) can be applied not only to semiconductor triodes, but also to tube oscillators, but the function (8) determines the characteristics of the triode as shown on Fig. 2.

Card 5/23

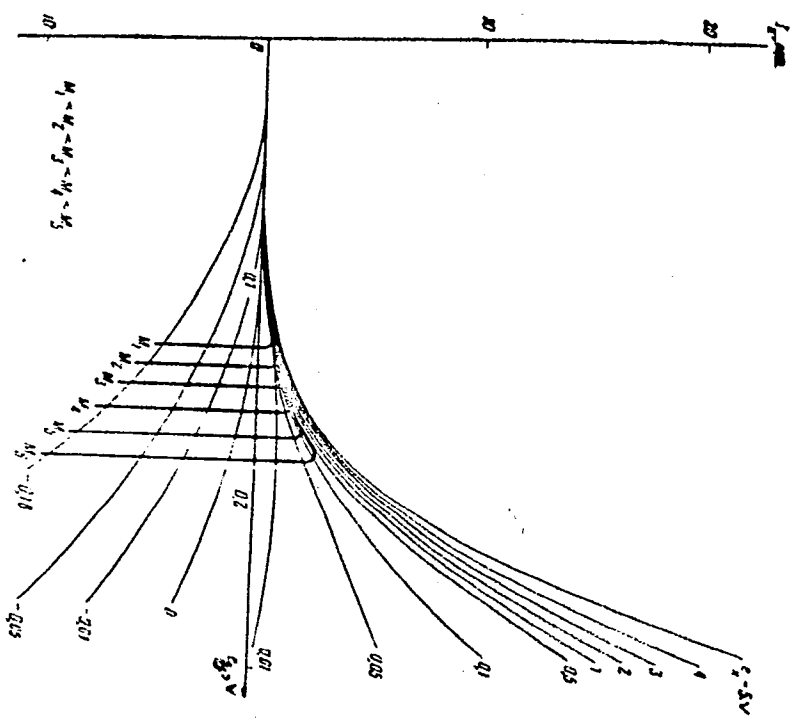


Fig. 2. Caption on Card 7/23.

Card 6/23

Fig. 2. Family of static characteristics of a semiconductor triode and of characteristics $i_k = f_1(e_b)$ (heavy lines).

The curves areshown for constant E_k and E_b for different M. The abruptly falling branches of the heavy curves are characteristic of transistors, and are absent for tubes where the anode current cannot drop below zero. The voltage in a transistor can be considered as following approximately a sinusoid only as long as condition $e_b < e_a$ is approximately satisfied (e_a is voltage on the base, corresponding to the maximum of the curve $i_k = f_1(e_b)$, that is, in the vicinity of point a on Fig. 3.

Investigation of a Transistorized LC Oscillator

77958
SOV/109-5-3-12/26

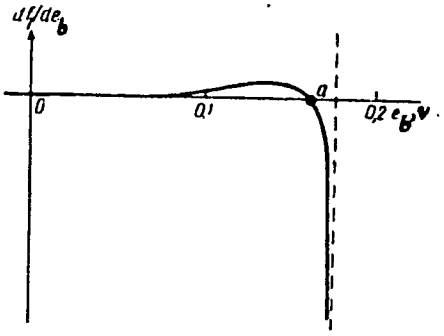


Fig. 3

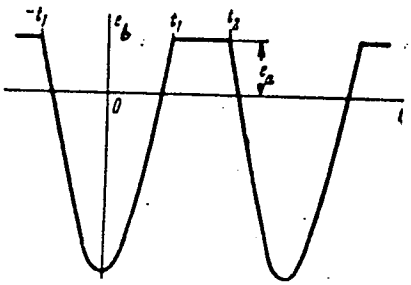


Fig. 4

Fig. 3. Relation of df_1/de_b from voltage on base e_b.

Fig. 4. Shape of base voltage.

Card 8/23

For $e_b > e_a$ the voltage e_b can change but little, and in the first approximation can be considered constant and equal e_a. Thus, the shape of voltage curve in Fig. 4 consists of sinusoids and straight lines. Dividing the oscillation period into two parts, and taking the moment corresponding to e_b as the beginning of the time counting, it can be stated in the first approximation:

$$\left.\begin{aligned} e_b &= -A\cos\omega_0 t + E_b \text{ for } |t| \leqslant |t_1|, \\ e_b &= e_a \text{ for } t_1 \leqslant |t| \leqslant t_2, \end{aligned}\right\} \qquad (9)$$

where e_a is taken from curves of Fig. 2. The terms A, t_1 and t_2 are not known yet. From (6) the collector voltage can be determined as

$$\left.\begin{aligned} e_{\text{к}} &= E_{\text{к}} - \frac{L}{M} A\cos\omega_0 t \quad \text{for} \quad |t| \leqslant t_1, \\ e_{\text{к}} &= E_{\text{к}} - \frac{L}{M}(E_{\text{б}} - e_{\text{a}}) \quad \text{for} \quad t_1 \leqslant |t| \leqslant t_2. \end{aligned}\right\} \tag{10}$$

For moment t_1 from the continuity condition of voltage, using (10), it can be stated that:

$$A\cos\omega_0 t_1 = E_{\text{б}} - e_{\text{a}}. \tag{11}$$

the current in the inductive part of the circuit for $|t| \leqslant t_1$ is:

$$i_L = -i_C = C\frac{de_{\text{к}}}{dt} = \frac{A}{\omega_0 M}\sin\omega_0 t; \tag{12}$$

but for $t_1 < |t| < t_2$

$$i_L = \frac{1}{L}\int (E_{\text{п}} - e_{\text{п}})dt = \frac{1}{M}(E_{\text{б}} - e_{\text{а}})t + D, \qquad (13)$$

where D is the integration constant. Due to the continuity of current i_L, making (12) and (13) equal, it can be stated for $t = t_1$:

$$\frac{A}{\omega_0 M}\sin \omega_0 t_1 = \frac{1}{M}(E_{\text{б}} - e_{\text{а}})t_1 + D. \qquad (14)$$

This equation for time t_2 gives:

$$\frac{1}{M}(E_{\text{б}} - e_{\text{а}})t_2 + D = I. \qquad (15)$$

Similarly for $t = t_1$ from (12) and (13), it follows that:

$$-\frac{A}{\omega_0 M}\sin\omega_0 t_1 = \frac{1}{M}(E_b - e_a)\,t_2 + D. \qquad (16)$$

This system of equations permits finding all needed data. From (11), (15) and (16):

$$A = \sqrt{(E_b - e_a)^2 + (\omega_0 M I)^2}. \qquad (17)$$

t_1 can now be determined from (11). From (14), (15), and (16):

$$\frac{1}{M}(E_b - e_a)(t_2 - t_1) = 2I$$

and

$$t_2 - t_1 = 2I\frac{M}{E_0 - e_a} = 2I\frac{|M|}{e_a - E_b}, \qquad (18)$$

Determining D and substituting it into (13), the current

$$i_L = \frac{1}{|M|}(e_a - E_0)(t - t_1) - I. \qquad (19)$$

is found. Equation (17) can now be rewritten as:

$$A = (e_a - E_b)\sqrt{1 + \left[\frac{\omega_0}{2}(t_2 - t_1)\right]^2}. \qquad (20)$$

and the current (12) amplitude is:

$$B = \frac{A}{\omega_0 |M|} = \frac{1}{\omega_0 L}(E_к - e_к)\sqrt{1 + \left[\frac{\omega_0}{2}(t_2 - t_1)\right]^2} \qquad (21)$$

where $e_к$ is determined by the second formula of (10). The amplitude:

$$T = \frac{2}{\omega_0}\arccos\frac{E_b - e_a}{A} + 2I\frac{|M|}{e_a - E_b}. \qquad (22)$$

Taking into consideration that the jumps of current on the collector occur at low voltages (see Fig. 2), Eqs. (17), (21), and (22) can be simplified, and it may be assumed that $e_k = 0$. Now Eq. (6) takes shape of:

$$L(E_б - e_в) = -|M|E_н, \tag{23}$$

$$e_э = E_б + \frac{|M|}{L}E_н. \tag{24}$$

Substituting (24) into (18)

$$t_2 - t_1 = \frac{2IL}{E_н}. \tag{25}$$

The base voltage amplitude is now:

$$A = \frac{|M|}{L}\sqrt{E_н^2 + \rho^2 I^2}, \tag{26}$$

where $\rho = \omega_0 L$ is characteristic resistance of circuit. The amplitude of current in the inductive branch

$$B = \frac{E_н}{\rho}\sqrt{1 + \left(\frac{\rho I}{E_н}\right)^2} \qquad (27)$$

and the period of self-oscillations

$$T = \frac{2}{\omega_0}\arccos\left(-\frac{|M| E_н}{LA}\right) + \frac{2IL}{E_н} . \qquad (28)$$

It is of interest to note that for many types of triodes, in particular those of П1, П2, П6, П13, П14, the current maxima I are located on one of the static characteristics, namely, on the one for e_k = 0.4 v. This greatly simplifies the calculations, since it eliminates the necessity of determining the family of static characteristics. Using characteristic $i_k = i_k (e_b)$ for e_k = 0.4 v and e_a which is determined

from (24), the respective I is calculated; this value is substituted into (25) through (28). 3. Comparison of Experiments with the Theory. Experiments were conducted with triodes of types III, II6, II13, II14 at oscillatory circuit frequencies from 10 to 15 kc. Self-inductance of the coil was approximately 30 mh, while the inductance of the coupling coil was 30 μ. The coupling variometer permitted a variation of mutual inductance M within limits of 0-0.32 mh. Ambient temperature was 20° C. Oscillation frequency was measured by comparison to an audio signal generator, but the oscillation shapes were observed and analyzed with electron oscillograph. The experimental curves do reasonably agree with the theoretically calculated curves. The difference can be explained by the assumptions of absence of losses in the circuit and the base current. The influence of operating conditions on the amplitude and frequency of oscillations and magnitude and shape of the currents in the base and collector, small active resistances (up to 30 ohm) were

added into the capacitive and inductive branches of the circuit, and the voltages measured with an electron-ray tube. For weak coupling the oscillation frequency is almost equal to the frequency of the oscillatory circuit. With increase of regeneration the frequency drops (Fig. 6). From Figs. 7 and 8, it may be seen that a change of E_k, contrary to the influence of E_b, practically does not change the self-oscillation frequency.

Investigation of a Transistorized LC Oscillator

77958
SOV/109-5-3-12/26

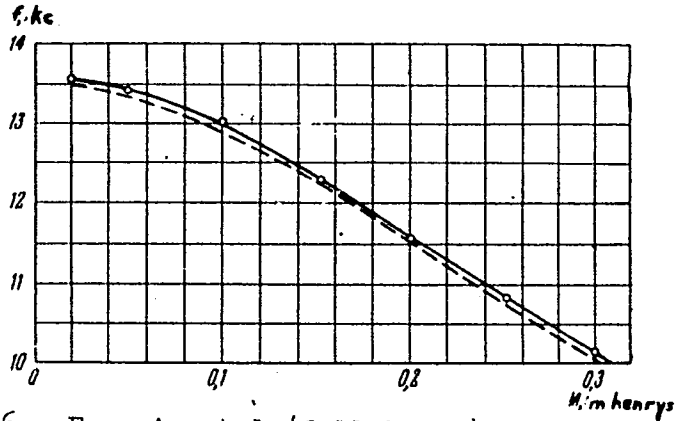


Fig. 6. Experimental (full lines) and theoretical (dotted lines) self-oscillation frequencies vs coefficient of mutual inductance (triode П13: E_k = 5v, E_b = 0.13 v).

Card 18/23

Investigation of a Transistorized LC Oscillator

77958
SOV/109-5-3-12/26

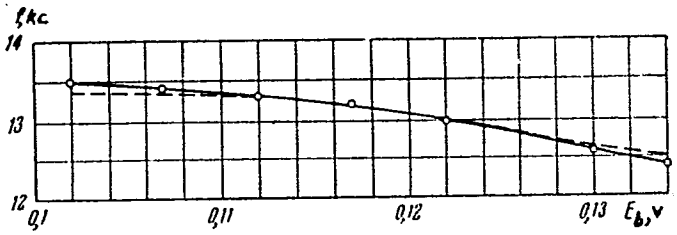


Fig. 7.

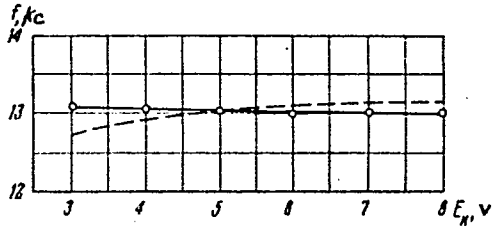


Fig. 8.

Fig. 7. Dependence of self-oscillation frequency on the bias voltage on the base (dotted lines-theoretical); triode II13:E_k = 5v, M = 0.115 mh.

Fig. 8. Frequency of self-oscillation vs collector voltage (triode II13:E_b = 0.122v, M = 0.115 mh).

Follow Figs. 9-11, showing influence of regeneration, and also voltage at the collector and base on the voltage oscillation amplitude of the circuit A'.

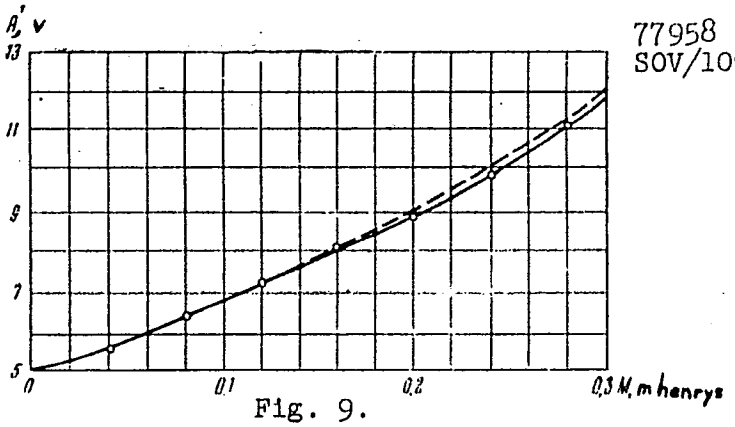


Fig. 9.

Fig. 9. Dependence of the oscillation amplitude of the circuit on the magnitude of mutual inductance (dotted lines-theoretically calculated; triode П13: E_k = 5v, E_b = 0.13v).

Card 20/23

Investigation of a Transistorized LC Oscillator

77958
SOV/109-5-3-12/26

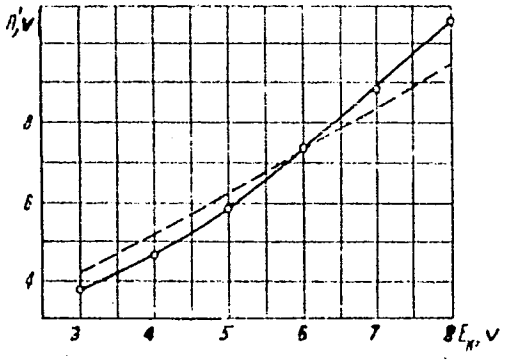


Fig. 10. Oscillation amplitude of the circuit vs voltage on the collector (dotted lines-theoretical; triode П13: E_b = 0.122v, M = 0.115 mh).

Card 21/23

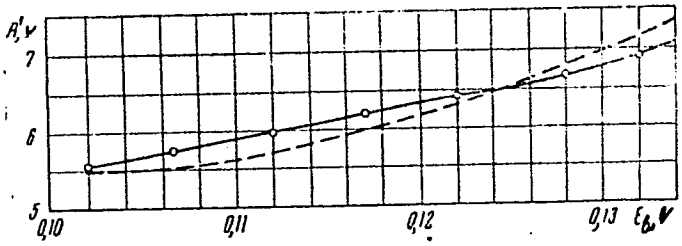


Fig. 11. Oscillation amplitude of the circuit vs bias voltage on the base (dotted lines- theoretical; triode II13: E_K = 5v, M = 0.115 mh).

The errors of theoretical calculations of E_b for magnitudes below or equal 0.13v do not exceed 8%. For greater bias the errors sharply increase.

Conclusions. The presented method permits a comparatively simple calculation of the amplitude and frequency of a low-frequency oscillator, or also the

Investigation of a Transistorized LC Oscillator

77958
SOV/109-5-3-12/26

reverse problem of determining the operating conditions of the oscillator for given frequency and amplitude. The most advantageous operating conditions are those at low bias (E_b) on the base junction, that is, in the part of characteristic where the theoretical results are closest to the experimental. Since it is not necessary to determine the curve family of static characteristics, this theory can be easily applied. It seems the new method could be applied, with some modifications, to the investigation of transient processes in auto-oscillators, blocking-generators, relaxation systems, and other devices. It is mentioned also that experiments proved the validity of the theory for auto-oscillators with inclusion of a transistor in a circuit with common base. There are 12 figures; and 5 references, 3 Soviet, 1 U.S., 1 German. The U.S. reference is: G. C. Chengf, Frequency Stability of Point-Contact Transistor Oscillators, Proc. I.R.E., 44, 2, 219 (1956).

SUBMITTED: December 11, 1958
Card 23/23

S/109/61/006/012/004/020
D266/D305

9.1610

AUTHORS: Kontorovich, M.I., and Petrun'kin, V.Yu.

TITLE: On the minimum number of control elements in an antenna using electric scanning

PERIODICAL: Radiotekhnika i elektronika, v. 6, no. 12, 1961 1982 - 1988

TEXT: The paper is concerned with antennas where scanning is achieved by non-mechanical means. The authors purpose is to determine the minimum number of elements which are necessary for scanning a specified angular region. The authors assume that the total electric field in the far zone can be written in the following form

$$E = \sum_{i=1}^{n} C_i P_i \qquad (14)$$

where P_i - a function of φ and θ represents the radiation pattern

Card 1/3

On the minimum number of control ...

of an inidvidual element, φ and θ are the azimuth and elevation angle respectively in a spherical coordinate system, C_i - constant determined by the excitation of the element, n - number of elements The P_i function is assumed to satisfy the orthogonality conditions

$$\int_S P_i(\varphi, \theta) P_k^*(\varphi, \theta) ds = 0, \quad \int_S /P_i(\varphi, \theta)/^2 ds = 1 \qquad (1)$$

where P_k^* - complex conjugate of P_k, S - surface of the sphere of unit radius (taken large enough to be in the far zone). The author then proceeds to show that under these assumptions the following inequality is valid

$$D \leqslant 4\pi \sum_{i=1}^{n} /P_i/^2 \qquad (15)$$

where D - directivity. The equality holds at a special set of the coefficients C_i. Taking now D as a function of φ_0, θ_0 (direction of

Card 2/3

3444
S/109/62/007/002/008/024
D266/D303

9,1912

AUTHORS: Kontorovich, M.I., Petrun'kin, V.Yu., Yesepkina, N.A., and Astrakhan, M.I.

TITLE: Reflection coefficient of plane electromagnetic waves reflected by a planar wire grating

PERIODICAL: Radiotekhnika i elektronika, v. 7, no. 2, 1962, 239 - 249

TEXT: The paper provides some theoretical and experimental data on the reflection of electromagnetic waves by a set of wires. The physical arrangement can be seen in Fig. 1: The wires are infinitely long and have infinite conductivity, the diameter of the wires is $2r_0$ placed a distance a from each other. The two different sets (being rectangular to each other) are separated by a distance l. If the limitations

$$r_0 \ll a, \quad l \ll a, \quad a \ll \lambda \qquad (1)$$

are imposed, then M.I. Kontorovich's approximate boundary conditions can be used (Ref. 1: Primeneniye metoda usredneniya poley k

Card 1/4

[illegible] ry. There are 4 figures and 3 references: 2 Soviet-[illegible]

Card 2/4

Reflection coefficient of plane ...

Soviet-bloc. The reference to the English-language publication is as follows: J.R. Wait, Appl. Scient. Res. B, 1954, 4, 393.

SUBMITTED: June 12, 1961

Card 3/4

L 19001-63 EWT(1)/BDS AFFTC/ASD/IJP(C)

ACCESSION NR: AP3006452 S/0109/63/008/009/1506/1515

AUTHOR: Kontorovich, M. I.

TITLE: Averaged boundary conditions on the surface of a square-mesh screen

SOURCE: Radiotekhnika i elektronika, v. 8, no. 9, 1963, 1506-1515

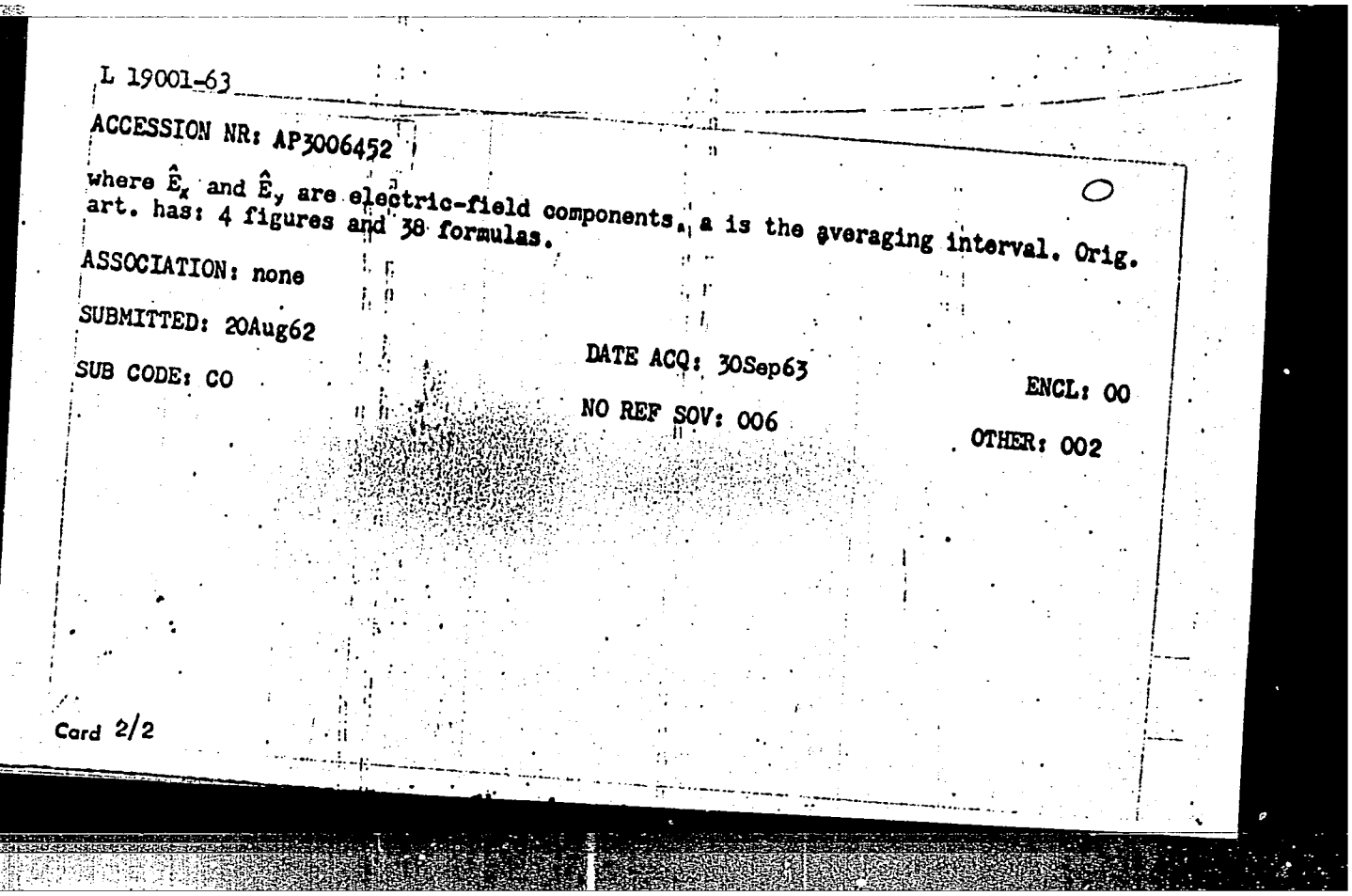
TOPIC TAGS: metal screen, screen shield, electromagnetic wave

ABSTRACT: A mathematical investigation is presented of penetration of electromagnetic waves into a wire-screen shield with square mashes. A method of "averaged boundary conditions" is used to describe mathematically the conditions on the screen whose wires may not be in ideal contact with one another. The gist of the method is a certain "smoothed" electromagnetic field obeying the Maxwell laws (that replaces the real field transmitted through or reflected from the wire screen) and a plane (that replaces the screen) on which certain boundary conditions are observed; the conditions depend on the screen structure. The averaged boundary conditions for the case of no contact between wires are:

$$\hat{E}_x = \frac{2i\omega a}{c^2}\left(\ln\frac{a}{r_0} - 1{,}84\right)\left[j_x + \frac{1}{k^2}\frac{\partial^2 j_x}{\partial x^2}\right],$$

$$\hat{E}_y = \frac{2i\omega a}{c^2}\left(\ln\frac{a}{r_0} - 1{,}84\right)\left[j_y + \frac{1}{k^2}\frac{\partial^2 j_y}{\partial y^2}\right].$$

Card 1/2



L 19001-63

ACCESSION NR: AP3006452

where $\hat{E}_x$ and $\hat{E}_y$ are electric-field components, a is the averaging interval. Orig. art. has: 4 figures and 38 formulas.

ASSOCIATION: none

SUBMITTED: 20Aug62 DATE ACQ: 30Sep63 ENCL: 00

SUB CODE: CO NO REF SOV: 006 OTHER: 002

Card 2/2

KONTOROVICH, M.I.

Input functions of electric two-terminal networks. Radiotekhnika 18 no.10:3-9 O '63. (MIRA 16:12)

1. Deystvitel'nyy chlen Nauchno-tekhnicheskogo obshchestva radiotekhniki i elektrosvyazi im. A.S.Popova.

KONTOROVICH, Mikhail Iosifovich; AKILOV, G.P., red.

[Operational calculus and processes in electrical circuits] Operatsionnoe ischislenie i protsessy v elektricheskikh tsepiakh. Izd.3, dop. Moskva, Nauka, 1964. 328 p. (MIRA 17:11)

ACCESSION NR: AP4043685 S/0109/64/009/008/1509/1513

AUTHOR: Kontorovich, M. I.; Astrakhan, M. I.; Spirina, M. N.

TITLE: Delaying electromagnetic waves by wire screens

SOURCE: Radiotekhnika i elektronika, v. 9, no. 8, 1964, 1509-1513

TOPIC TAGS: conducting screen, wire screen, wire screen antenna

ABSTRACT: A theoretical investigation of delaying electromagnetic waves by two plane-parallel wire screens with rectangular meshes is reported. The theory may be applicable to a Barry-Miller antenna (Aviat. Week, 1963, 79, 10, 80-82, 85). In the case of a soldered screen with a square mesh, the TE-wave is not delayed, while the TM-wave propagating along the z-axis without attenuation has a phase velocity $v_\phi = \frac{c}{\gamma/k}$, where $\gamma/k > 1$ and can be determined from this equation:

$$kh = \frac{1}{2\sqrt{(\gamma^2/k^2)-1}} \ln\left[1 - \frac{2a}{\lambda} \ln \frac{a}{2\pi r_0} \frac{1-0{,}5(\gamma^2/k^2)}{\sqrt{(\gamma^2/k^2)-1}}\right],$$

Card 1/2

Card 2/2

L 39943-66

ACC NR: AP6014683 SOURCE CODE: UR/0108/65/020/012/0034/0042

AUTHOR: Kontorovich, M. I. (Active member); Sokolova, N. O. (Active member)

ORG: Scientific and Technical Society of Radio Engineering and Electrocommunication (Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi)

TITLE: Integral equation describing current distribution in a straight-line antenna

SOURCE: Radiotekhnika, v. 20, no. 12, 1965, 34-42

TOPIC TAGS: antenna theory, antenna engineering

ABSTRACT: The validity of the E. Hallen antenna integral equation (N.A.R. Soc. Sci., Upsala, Series 4, vol. 11, 1938) has been repeatedly questioned by Western (IRE Trans., AP-4, no. 3, 1956) and Soviet specialists. This article tries to clarify some points in the development and application of this equation. The current in a straight-line tubular antenna is given by: $\int_{-l}^{+l} I(\xi) K(x-\xi)\, d\xi = M \cos \kappa x - i \int_{0}^{x} E_{em}(\xi) \sin \kappa (x-\xi)\, d\xi$, where $K(x-\xi)$ is the kernel. It is usually assumed that: $\sin k(x-\xi) \approx \sin kx$; then,

Card 1/2 UDC: 621.396

L 39943-66

ACC NR: AP6014683

the above equation is reduced to: $\int_{-l}^{+l} I(\xi) K(x-\xi)\, d\xi = M \cos \kappa x - i \frac{e}{2} \sin \kappa |x|$, where:

$e = \int_{-\frac{\delta}{2}}^{\frac{\delta}{2}} E_{em}(\xi)\, d\xi$; $0 < |\mu| < l$. A proof is served that, with the "gap" (the point of emf application) approaching zero, the effect of currents in the "gap" vanishes. This confirms the validity of the above simplified equation and permits recognizing the integral as improper in the Riemmanian sense. "The authors wish to thank Professor B. V. Braude with whom all principal points of this article were discussed." Orig. art. has: 28 formulas.

SUB CODE: 09 / SUBM DATE: 21Dec64 / ORIG REF: 008 / OTH REF: 003

Card 2/2

L 42054-66 EWT(1)/T TCH/JT/WR
ACC NR: AP6012344 SOURCE CODE: UR/0108/66/021/004/0079/0080

AUTHOR: none

ORG: none

TITLE: M. I. Kontorovich

SOURCE: Radiotekhnika, v. 21, no. 4, 1966, 79-80

TOPIC TAGS: academic personnel, electronic personnel

ABSTRACT: Mikhail Iosifovich Kontorovich, the present Director of the Department of Radio Physics of the Leningrad Polytechnic Institute, is a leading Soviet authority on the theory of EM oscillations and antenna engineering. In his 37-year career as engineer, scientist, and teacher, Dr. Kontorovich has published over 50 scientific works on both practical and theoretical subjects which have added substantially to the Soviet state of the art in radio physics and radio engineering. Dr. Kontorovich graduated from the Leningrad Institute of Electrical Engineering in 1929. He was awarded the degree of Doctor of Technical Sciences in 1940.

His professional career began in 1929 at the Elektrosvyaz' Trust, where he was employed as a design engineer. In 1930—1932 he pub-

Card 1/3

lished results of his research on radiation resistance and the passage of side frequencies through an antenna with a horizontal element. This work was done in connection with the installation of the antenna system for the 500-kw Komintern broadcasting station. Kontorovich's findings have since been included in standard textbooks on antennas. Another contribution by Kontorovich during this period was a paper on rectifiers for transmitter power supply.

In 1933—1934, Dr. Kontorovich was occupied with research on the construction of high-voltage transmission lines. His published works of this period include papers on the measurement of the wave impedance, the theory of transient processes in transformers, the measurement of lightning discharge current, and thermal breakdown of high-voltage cables.

In 1938—1939, Dr. Kontorovich and N. N. Lebedev developed an original method of solving electrostatic problems and problems of the theory of diffraction based on the use of integral transforms. Another product of Kontorovich's research in the decade of the thirties was the publication in 1940 of his doctoral dissertation on a method of field averaging for investigation of discrete structures. His research

Kontorovich, M-F

RSFSR -7- 15 Sep 61

LE 563

An Ukase of the Presidium, Sup Sov USSR Made the Awards Indicated to the Following Persons in Recognition of their Work in the Training of Specialists and for the Development of Science:

[Cont from card 6, see SMOLOV, V. B., same date]

Medal "For Valorous Labor": (Awards for Leningrad City - contd)

DUKEL'SKIY, Aleksandr Iosifovich, Professor; Head of Chair, Leningrad Polytechnic Institute;

ZHURIN, Aleksandr Ivanovich, Docent, Leningrad Polytechnical Institute;

IVANOVA, Vera Petrovna, Senior Instructor, Leningrad Shipbuilding Institute;

IVANOVA, Raisa Kirillovna, Senior Instructor, Leningrad Technological Institute im. Lensovet;

KARAULOV, Aleksey Nikolayevich, Docent; Head of Chair, Leningrad Shipbuilding Institute;

KONTOROVICH, Mikhail Iosifovich, Professor; Head of Chair, Leningrad Polytechnic Institute im. Kalinin;

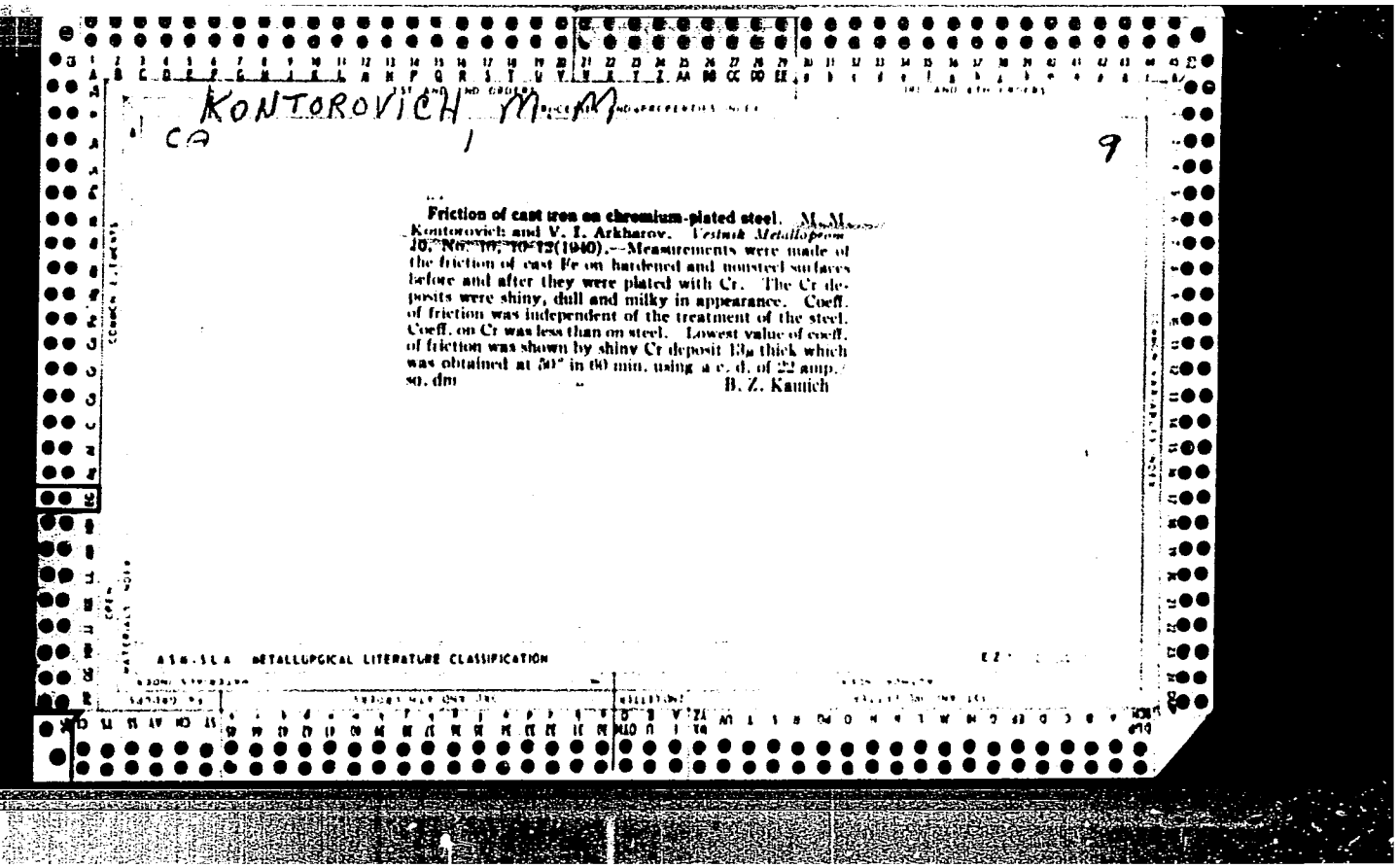
KRUGLOV, Aleksey Semenovich, Docent, Leningrad Institute for Aircraft Instrument Making;

KUDRYAVAYA, Kseniya Ivanovna, Professor; Head of Chair, Leningrad Hydrometeorological Institute;

[Cont on card 8, see LOMOVA, Mariya Ivanovna, same date]

Leningradskaya Pravda, 22 Sep 61

47
(8)
as



KONTOROVICH M.M.

CA 1 9

Friction of cast iron on chromium-plated steel. M. M. Kontorovich and V. I. Arkharov. *Vestnik Metallopromy* 10, No. 10, 10-12(1940).—Measurements were made of the friction of cast Fe on hardened and nonsteel surfaces before and after they were plated with Cr. The Cr deposits were shiny, dull and milky in appearance. Coeff. of friction was independent of the treatment of the steel. Coeff. on Cr was less than on steel. Lowest value of coeff. of friction was shown by shiny Cr deposit 13μ thick which was obtained at 50° in 60 min. using a c. d. of 22 amp./sq. dm. B. Z. Kanich

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

KONTOROVICH, M. M.

ARKHAROV, V. I., KONTOROVICH, M. M.

Texture of Iron Scale. III. Study of the Scale Formed during the Oxidation of Iron by Water Vapor. ZhTF 14, 151, 1944.

LEYTEYZEN, M.O.; KONTOROVICH, N.M.

Two-stage calcination of aluminate solutions. Tsvet. met. 34 no.12:49-54 D '61. (MIRA 14:12)
(Alumina)

AUTHORS: Agafonova, Ye. N. and Kontorovich, ~~N. P.~~ 126-5-3-4/31

TITLE: Criteria for the Semimetallic State on the Multi-Electron Theory (Kriteriy polumetallicheskogo sostoyaniya veshchestva po mnogoelektronnoy teorii)

PERIODICAL: Fizika Metallov i Metallovedeniye, 1957, Vol V, Nr 3, pp. 402-5 (USSR)

ABSTRACT: The mean electron energy in an atomic impurity semi-conductor is derived from the multi-electron theory, assuming closed shells. It is shown that the formation of a constant concentration of carriers, independent of temperature, and equal to the impurity concentration is favoured by energy consideration. Typical semimetallic substances are PbS, PbSe, SiC, etc., as these have conductivities which at first fall as the temperature rises, but at higher temperatures begin to increase. The initial wave equation (1) is of standard form, the dashed quantities relating to impurity atoms. Bogolyubov's second quantization method is then applied to derive the energy operator (Eq.2). The subsequent operations are straightforward, and give the same result as is obtainable by extending the quasiclassical treatment of Shubin (Ref.6) to polar states. The formulae are

Card 1/2

126-5-3-4/31

Criteria for the Semimetallic State on the Multi-electron Theory applied to some results of Lark-Horovitz (Ref.7).
There are 7 references, 6 of which are Soviet, 1 German.

ASSOCIATION: Ural State University imeni A. M. Gor'kiy
(Ural'skiy Gosudarstvennyy Universitet imeni A.M. Gor'kiy)

SUBMITTED: December 20, 1956

1. Semiconductors--Conductivity 2. Semiconductors--Temperature factors
3. Electrons--Energy 4. Mathematics

Card 2/2

SOV/126-7-5-6/25

AUTHORS: Giterman, M.Sh., and ~~Kontorovich, N.P.~~

TITLE: On the Dependence of ~~Parameters~~ of a Semiconductor on the Density of Impurities (O zavisimosti parametrov poluprovodnika ot kontsentratsii primesey)

PERIODICAL: Fizika metallov i metallovedeniye, 1959, Vol 7, Nr 5, pp 673-676 (USSR)

ABSTRACT: S.V. Vonsovskiy and his co-workers developed recently a multi-electron theory of semiconductors (Refs 3,4) in which the interacting electrons were represented as a dynamically equivalent ideal quasi-particle gas. Properties of this gas are determined by the properties of the multi-electron assembly, and in the case of an impurity semiconductor should depend on the impurity density. The present authors used Vonsovskiy's theory to discuss the energy spectrum of an n-type atomic semiconductor with impurities, such as germanium with arsenic (Vonsovskiy's theory can be used also to study the energy spectrum of a semiconductor with acceptor impurities). The authors deduced dependence of the activation energy and the effective mass of current carriers on the impurity density. [The paper is

Card 1/2

On the Dependence of Parameters of a Semiconductor on the Density of Impurities

entirely theoretical.] Acknowledgements are made to S.V. Vonsovskiy, Yu.P. Irkhin and I.M. Tsidil'kovskiy for their advice.

Card 2/2 There are 8 references, 5 of which are Soviet and 3 English.

ASSOCIATION: Ural'skiy gosudarstvennyy universitet (Urals State University)

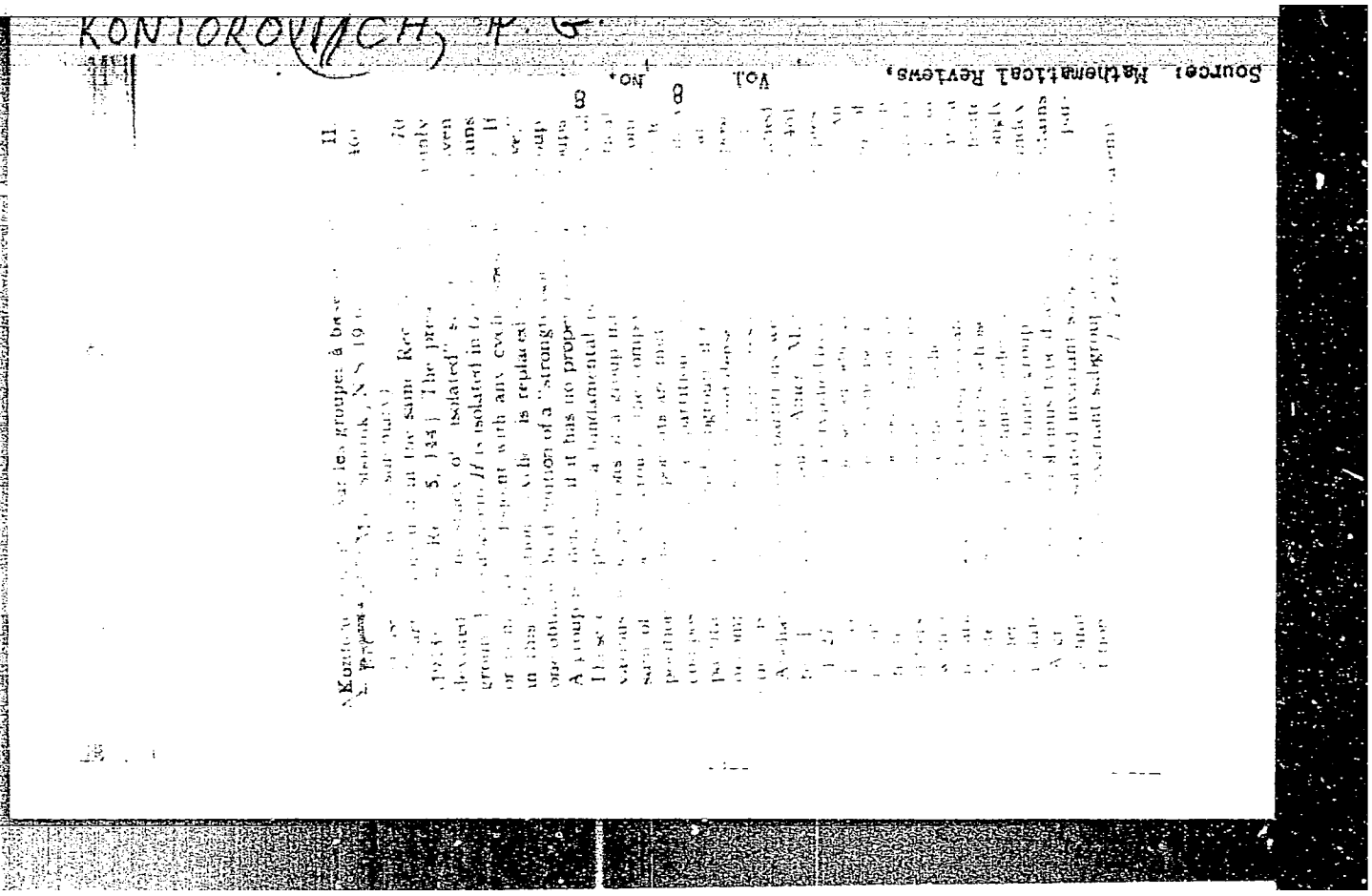
SUBMITTED: March 30, 1958

KONTOROVICH, P. G.

Concerning Several Properties of Semi-Direct Products," Dokl. AN SSSR, 22, No.9, 1939

Industrial Inst., Sverdlovsk

KONTOROVICH, F. S.



KONTOROVICH, P.G.

Kontorovič, P. G. Groups with a basis of [illegible] Mat. Sbornik N.S. 22(64), [illegible] (194[illegible])

Parts I and [illegible] appeared in Rec. Math. [illegible] N.S. 12(54), [illegible] (1943); 19(61), 281 [illegible] Rev. 5, 144; 8 [illegible]. Part III is chiefly [illegible] R-groups and their isolated subgroups. The [illegible] group [cf. part II for definitions] is completely [illegible] ponents are locally cyclic. [illegible] partition if and only if every [illegible] finitely many generators has [illegible] groups is partitioned, the components of [illegible] clude the free factors and all [illegible] components of partition of a group [illegible] group is Abelian. If the center Z of a group [illegible] is not 1, then Z is a p-group [illegible] torsion (i.e., has no element of finite order) [illegible] center of a completely partitioned group [illegible] group is periodic or without torsion [illegible] tioned group without torsion [illegible] Abelian group without torsion [illegible] the present paper [illegible] relat[illegible] [illegible] 3 [illegible] 19[illegible] [illegible] torsion [illegible] only [illegible] every element [illegible] isolated [illegible] groups [illegible] R-group if [illegible] law [illegible] root of an element in the [illegible] extraction is possible. The [illegible] of R-[illegible] groups, locally free groups, free products [illegible] free groups of R-groups, groups without torsion [illegible] sub-[illegible] maximal Abelian subgroup [illegible] isolated, [illegible] every invariant R-groups. In an arbitrary group the [illegible] by [illegible] of all isolated subgroups containing a [illegible] section [illegible] H is called the isolator of H; basic properties [illegible] are studied. Results connecting R-groups [illegible] groups

Source: Mathematical Reviews, 1952 Vol / No. /

are obtained. Elements in an R-group may be classified according to genus, with the aid of the Steinitz generalized numbers [cf. Baer, loc. cit.]. An element a in the set A is called primitive in A if, for each integer n [illegible] equation $x^n = a$ is solvable provided $x \in A$ is [illegible]. An invariant subgroup F of an R [illegible] quotient group is a semidirect factor [illegible] if and only if at least one coset of [illegible] F is a complete [illegible] element. Direct products of R-groups are investigated. The direct decomposition of an R-group is unique to within isomorphisms, provided elements in the same factor of decomposition have the same genus while elements in different factors have different genera. The factor group of a group without torsion G modulo its invariant subgroup F is an R-group if and only if the [illegible] is an isolated subgroup for every element $g \in G$. A group without torsion is an R-group if and only if [illegible] modulo the center is an R group. Also discussed are central series, especially those in which every term is an isolated subgroup. *F. A. Good* (College Park, Md.)

Mathematical Reviews, 9/2 Vol [illegible] No. [illegible] (SMW) RH

KONTOROVICH, P. G.

Kontorovic, P. On the theory of noncommutative groups
[illegible] SSSR (N.S.) 59, [illegible]

The [illegible] the theory of completely [illegible] Abelian groups without torsion as [illegible] (1917) remain valid for a much wider class of groups which he calls R-groups. A group G without torsion (i.e., without elements of finite order, other than 1) is an R-group if it can be represented in the form of a set-theoretical sum of locally cyclic subgroups, to prime to pairs. A "locally cyclic" group is an Abelian [illegible] (Baer). Examples of R-groups [illegible] Abelian and non-abelian groups without torsion, the [illegible] groups [illegible] 44 [illegible] 144 [illegible] 8, 137] and more [illegible] a finite or infinite [illegible] factor-groups of which are without torsion. Free groups and locally free have at least one member in common. Stiefel's theorem is also generalized in another direction, to a statement about lattices (in the crystallographic sense).

H. S. M. Coxeter (Toronto, Ont.).

Source: Mathematical Reviews, Vol 9 No. 8

KONTOROVICH, P. G.

Kontorovič, P. G. **Groups with a basis of partition. IV.** Mat. Sbornik N.S. 26(68), 311–320 (1950). [Russian]

[For part III see Mat. Sbornik N.S. 24(66), 53–70 (1949); these Rev. 9, 493.] A paper by Baer [Amer. J. Math. 59, 385–422 (1937)] discusses the smallest partial decomposition of an Abelian torsion-free group. The theory is extended to R-groups [cf. Doklady Akad. Nauk SSSR (N.S.) 59, 213–216 (1948); these Rev. 9, 408]. Only slight modifications (primarily in terminology) need be made in the statements of results in sections 2.3, 2.7, 9.3a, b, 9.8, 9.9, 9.10 in Baer's paper, in order to obtain the analogous generalized results of this paper. [MR 11, 706e].

Source: Mathematical Reviews, 1950 Vol 11 No.

KONTOROVICH, P.G.

for arbitrary group G of [illegible]

such hypercenter of G is a group with a [illegible]

[illegible], whence a group with a [illegible]

[illegible] has category. The class of groups [illegible]

the class of groups with ascending [illegible]

[illegible] to be closely interrelated, although neither includes

[illegible]. All periodic elements in a group with category

[illegible] a subgroup. A finite group is special if and only if it

has category. Finally, certain relationships involving [illegible]

computation elements are obtained in a group with finite

R. A. Good (College Park, Md.)

KONTOROVICH, P. G.

Mathematical Reviews
Vol. 14, No. 10
Nov., 1953
Number Theory

6-24-54
LL

Kontorovič, P. G., and Mil'man, D. I. On a method of N. I. Lobačevskiĭ for finding integer solutions of linear homogeneous equations with integer coefficients. Uspehi Matem. Nauk (N.S.) 8, no. 1(53), 145–149 (1953). (Russian)

The general integer solution of $a_1x_1+\cdots+a_nx_n=0$, where $a_1, \cdots, a_n$ are integers, as given in Skolem's Diophantische Gleichungen [Springer, Berlin, 1938] and ascribed to Betti (1852; cf. Skolem, op. cit., p. 4, 121) is to be found already in Lobačevskiĭ's course "Algebra" [Kazan Univ., 1834], although this point has not been made before. It is shown that his method also gives the most general solution of the independent equations $\sum_{i=1}^{n}a_{ji}x_i=0$ $(1\leqq j\leqq m<n)$ in the form

$$x_i=d^{-1}\sum(-1)^{i+\gamma}A_{\alpha_1,\alpha_2,\cdots,\alpha_{n-m-1},i}t_{\alpha_1}\cdots t_{\alpha_{n-m-1}}$$

where the t's are independent integer parameters, $A_{\alpha_1,\cdots,\alpha_{n-m}}$ is the determinant obtained by deleting columns $\alpha_1, \cdots, \alpha_{n-m}$ of the matrix of the equations, d is the greatest common divisor of the A's, and γ is the number of inversions in $\alpha_1, \cdots, \alpha_{n-m-1}, i$.

J. W. S. Cassels.

KONTOROVICH, P.

Kontorovič, P. On the theory of semigroups in a group. Doklady Akad. Nauk SSSR (N.S.) 93, 229–231 (1953). (Russian)

Let $\mathfrak{S}$ be a subsemigroup of a group G, "invariant in itself" in the sense that $a, b \in \mathfrak{S}$ implies $aba^{-1} \in \mathfrak{S}$. Using the well-known methods of Krull, [Idealtheorie, Springer, Berlin, 1935, esp. p. 9], the author shows that the intersection of all the minimal prime ideals of $\mathfrak{S}$ containing a given ideal $\mathfrak{A}$ of $\mathfrak{S}$ is the radical (here called the "insulator") of $\mathfrak{A}$. If $\mathfrak{A}$ is invariant, i.e. $a \in \mathfrak{A}$, $b \in \mathfrak{S}$ imply $bab^{-1} \in \mathfrak{A}$, if Π is the set of all elements $b \in \mathfrak{S}$ such that $bx \in \mathfrak{A}$ implies $x \in \mathfrak{A}$, and if $\mathfrak{p}$ is a minimal prime ideal containing $\mathfrak{A}$, then $\mathfrak{p}$ and Π are disjoint.

A. H. Clifford (Baltimore, Md.).

USSR/Mathematics - Structures with additive basis FD-1029

[redacted] Pub. 64 - 9/9

Author : Kontorovich, P. G. (Sverdlovsk), and Plotkin, B. I. (Sverdlovsk)

Title : Structures with additive basis

Periodical : Mat. sbor., 35(77), No 1, 187-192, Jul-Aug 1954

Abstract : In many structures, particularly in group structures, the operations of multiplication (intersection) and sum (union) essentially differ in their content: while the first operation conincides with the similar operation for sets the second operation does not possess such a property. The absence of the equivalent to the set-theoretic sum in a structure strongly limits the structure-theoretic treatment of a number of properties connected in one way or another with set-theoretic union (cup) as e.g. the property that each group is the set-theoretic sum of its cyclic subgroups. In the present article the author partially fulfills this need by the introduction of a new concept - the concept of the additive basis of a structure. This concept permits one to transfer to structures certain group-theoretic results and also to isolate classes of structures with groups of properties characteristic for some classes of groups. Four references, All USSR (e. g. Algbraicheskiy referativnyy sbornik (Algebraic abstract symposium) vol.2, Moscow 1948

Kontorovich, P. G.

Call Nr: AF 1108825

Transactions of the Third All-union Mathematical Congress* (Cont.) Moscow, Jun-Jul 56, Trudy '56, V. 1, Sect. Rpts., Izdatel'stvo AN SSSR, Moscow, 1956, 237 pp.

Card 9/80

*

Kontorovich, P. G.

SUBJECT USSR/MATHEMATICS/Algebra CARD 1/2 PG - 984

AUTHOR KONTOROVICH P.G., LAZMAN A.D.

TITLE Some types of elements of a semigroup being invariant in a group.

PERIODICAL Uspechi mat.Nauk 11, 3, 145-150 (1956)
reviewed 7/1957

The paper joins two papers of Kontorovich (Doklady Akad.Nauk 93, 229-231 (1953); Kazan.Gos.Univ.Zap. 114, 8, 35-43 (1954)). Let G be a torsion-free group, S a fixed invariant semigroup with unity in G which contains no inverses of its elements. A set $A<S$ is called an ideal if $SA<A$; ideals are two-sided. An ideal A is called isolated if from $x^n \in A$ there follows that $x \in A$. The isolator I(A) of an ideal A is the intersection of all isolated ideals containing A. It also is the set of all elements a power of which lies in A. An ideal is called a prime ideal if its complement is a semigroup in S. An element $a \in H$ is called isolated if the principal ideal Sa is isolated; it is called undecomposable if every representation a = uv is trivial; it is called prime if Sa is a prime ideal. An element can be isolated and undecomposable but no prime ideal, or it can be undecomposable but not isolated.

KONTOROVICH, P.G.; KURBATOV, V.A. (Sverdlovsk); GUTMAN, A.Ya. (Moskva); [illegible]EGA, A.V. (Kiyev); ISACHKIN, B.Ya. (Penza); METRONINA, N.G. (Tambov); PONOMAREV, V.S.(Izhevsk); SELIVANOV, D.P. (Korsun'-Shevchenkovskiy, Cherkasskaya obl.); KOLIKOV, A.F. (Kalinin); SHOR, Ya.A. (Moskva); IVANOV, M.I. (Tula)

Discussion of the new mathematics curricula. Mat. v shkole no.3: 4-20 My-Je '59. (MIRA 12:9)
(Mathematics)

16(1)

AUTHORS: Kontorovich,P.G., and Kutyyev,K.M. SOV/140-59-3-11/22

TITLE: On the Theory of Structurally Ordered Groups

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Matematika, 1959,Nr 3, pp 112-120 (USSR)

ABSTRACT: In the present paper the authors investigate structurally ordered groups (= l-groups) starting from the ideals of their semigroups of the positive elements. A great number of properties is formulated and proved, where the earlier investigations of Kontorovich on the theory of semigroups in a group [Ref 1,2,3] are very essential. There are partial overlappings with Lorenzen [Ref 5].
There are 6 references, 4 of which are Soviet, 1 German, and 1 American.

ASSOCIATION: Ural'skiy gosudarstvennyy universitet imeni A.M.Gor'kogo (Ural's State University imeni A.M.Gor'kiy)

SUBMITTED: May 12, 1958

Card 1/1

KONTOROVICH, P.G.; CHARIN, V.S.

The Ural Mathematical Society. Usp. mat. nauk 15 no.2:245-247 Mr-Ap '60. (MIRA 13:9)
(Sverdlovsk--Mathematical societies)

KONTOROVICH, P.G.; BUSARKIN, V.M.

0-isolated complexes in a group. Alg. i log. 1 no.3[illegible]20 '62
(MIRA 18:1)

KONTOROVICH, P.G.; KOKORIN, A.I.

A type of partially ordered groups. Mat. zap. Ural. mat. [redacted]o-va UrGU 3 no.3.39-44 '62. (MIRA 18:7)

KONTOROVICH, P.G.; BUSARKINA, L.R.; SHUMIKHINA, N.A.

Some set-theoretical partitions of bodies. Mat. zap. Ural. mat. ob-va UrGu 4 no.1:49-56 '63.

(MIRA 17:9)

KONTOROVICH, P.G.; IVANOV, S.G.; KONDRASHOV, G.P.

Distributive pairs of elements in the structure. Dokl. AN SSSR 160 no.5:1001-1003 F '65. (MIRA 18:2)

1. Submitted August 22, 1964.

KONTOROVICH, P.G.; PEKELIS, A.S.; STAROSTIN, A.I.

Problems concerning structure in the theory of groups. Mat. zap. Ural. mat. ob-va UrGu 3 no.1:3-50 '61. (MIRA 19:1)

KHEYFETS, L.B.; KAMOLIKOVA, T.L.; KONTOROVICH, R.A.

An outbreak of epidemic hepatitis at an arctic settlement. Vop.virus. 3 no.1:47-49 Ja-F '58. (MIRA 11:4)

1. Arkhangel'skiy meditsinskiy institut i Arkhangel'skiy institut epidemiologii, mikrobiologii i gigiyeny.
(HEPATITIS, INFECTIOUS,
epidemic in arctic settlement (Rus)

KONTOROVICH, S., inzh.; TIKHANOVSKIY, S., inzh.

Technology of the production of large details at the Kusnetsovskiy Housing Construction Combine. Zhil. stroi. no.9:16-19 S '60. (MIRA 13:9)
(Leningrad--Precast concrete construction)

5(4)

AUTHORS: Segalova, Ye. Ye., Kontorovich, S. I., Rebinder, P. A., Academician

SOV/20-123-3-36/54

TITLE: The Characteristic Features of the Kinetics of Supersaturation in Aqueous Suspensions of Calcium Oxide (Osobennosti kinetiki peresyshcheniya v vodnykh suspenziyakh okisi kal'tsiya)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 3, pp 509-512 (USSR)

ABSTRACT: The authors investigate the above-mentioned kinetics in order to find the characteristic features of its hydration hardening and the nature of the supersaturations in these suspensions. The above-mentioned kinetics were determined conductometrically in a special vessel with blackened platinum electrodes, a stirrer, and a thermometer. The experiments were carried out in a nitrogen atmosphere at a temperature of 21.6 ± 0.05°. A diagram shows the variation of the electric conductivity (concentration) of an aqueous suspension of CaO as a function of the rate of intermixing of the suspension. According to this diagram, the rate of intermixing has an influence not only on the rate of obtaining the maximum value of the electric conductivity, but also on its

absolute value. Even at an angular velocity of 1600 revolutions p/m of the mixer, no steady supersaturation was observed. The natural way of detecting the stable level of supersaturation is by introduction of surface-active substances into the aqueous suspensions of CaO. These admixtures practically do not change the solubility and can stabilize the generated nuclei and prevent their growth. In this way, the supersaturation in the liquid phase of the suspension is decreased. The authors introduced admixtures of sulfite-alcohol vinasse (barda) and glucose. By the addition of surface-active admixtures into aqueous suspensions of CaO, their electric conductivity sharply increases. A stable level of supersaturation is obtained by introduction of a sufficient quantity of admixtures. Moreover, it was necessary to investigate the dependence of the obtained maximum supersaturations on the batch of CaO. The greatest increase in temperature (0.5°) was observed only after the introduction of the first batch of CaO. The increase in temperature caused by the introduction of the following batches decreases the number of the introduced batches. The introduction of CaO into the solution of the surface-active substance sharply increases the electric conductivity which then remains constant for some

minutes. The fact that the maximum value of electric conductivity is independent of the batch of CaO shows that there is a constant level of supersaturation which can be considered as the relative dissolubility of calcium oxide. The dissolution of CaO proceeds until the maximum supersaturation is attained. A further dissolution proceeds only if the hydrate of calcium oxide crystallizes out from the solution. The concentration of solutions which contain colloid particles can be determined potentiometrically by means of a hydrogen electrode. There are 3 figures, 1 table, and 12 references, 9 of which are Soviet.

ASSOCIATION: Kafedra kolloidnoy khimii Moskovskogo gosudarstvennogo universiteta im. M. V. Lomonosova (Chair of Colloid Chemistry of Moscow State University imeni M. V. Lomonosov) Otdel dispersnykh sistem Instituta fizicheskoy khimii Akademii nauk SSSR (Branch of Dispersed Systems of the Institute of Physical Chemistry of the Academy of Sciences, USSR)

SUBMITTED: July 18, 1958

5(4) SOV/20-129-6-40/69

AUTHORS: Segalova, Ye. Ye., Kontorovich, S. I., Rebinder, P. A., Academician

TITLE: Features of Structural Crystallization in the Solidification of Calcium Oxide by Hydration

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 129, Nr 6, pp 1343-1346 (USSR)

ABSTRACT: The authors investigated the process of CaO hydration on suspensions which, besides CaO additionally contained 75% $CaCO_3$ as inert filling medium, so that the ratio between water and calcium was increased and structural development could be retarded and heating of the samples could be reduced. The pure $CaCO_3$ had a specific surface of 2000 cm^2/g, determined by Tovarov's apparatus. The strength of the suspensions was determined by means of a conical plastometer, and the rate of hydration was determined calorimetrically. Figure 1 and table 1 show the course of the strength and hydration of suspensions with a ratio between water and solid substance (W/S) of 0.4, 0.5, and 0.6. Strength at first increases rapidly as a result of crystallization of the main quantity of $Ca(OH)_2$, after which it decreases rapidly and only rises gradually with W/S = 0.4 until the end of hydration, as was also observed by G. I. Logginov (Ref 6).

Card 1/2

SUBMITTED: July 31, 1959

Card 2/2

KONTOROVICH, S. I., Cand Chem Sci -- (diss) "Physico-chemical investigation of the crystalline structure-formation in the solidification process of calcium oxide." Moscow, 1960. 12 pp; (Moscow State Univ im M. V. Lomonosov, Chemistry Faculty, Institute of Physical Chemistry of the Academy of Sciences USSR, Division of Disperse Systems); 150 copies; price not given; (KL, 18-60, 147)

SEGALOVA, Ye.Ye.; KONTOROVICH, S.I.; REBINDER, P.A.

Structuration taking place during the hydration solidification of calcium oxide of various dispersities. Koll.zhur. 22 no.1:74-81 Ja-F 60. (MIRA 13:6)

1. Institut fizicheskoy khimii AN SSSR Otdel dispersnykh sistem i Moskovskiy universitet, Kafedra kolloidnoy khimii.
(Lime)

KONTOROVICH, S.I., SEGALOVA, Ye.Ye., REBINDER, P.A.

Effect of adding surface active substances upon the development of the crystallization structure of the hardening of variously dispersed calcium oxide. Koll. zhur. 22 no.2:195-200 '60. (MIRA 13:8)

1. Moskovskiy universitet, khimicheskiy fakul'tet, kafedra kolloidnoy khimii i Institut fizicheskoy khimii AN SSSR, Otdel dispersnykh sistem.
(Lime) (Surface active agents)

KONTOROVICH, S.I., inzh.

Western Siberia is a new building site. Stroi. truboprov. 7 no.11: 3 N '62. (MIRA 15:12)

1. Giprospetsgaz, Leningrad.
(Siberia, Western—Construction industry)

KONTOROVICH, S.I.; SEGALOVA, Ye.Ye.; REBINDER, P.A.

Effect of gypsum on the hydration and hydration hardening of calcium oxide. Koll.zhur. 25 no.5;561-566 S-O '63. (MIRA 16:10)

1. Institut fizicheskoy khimii AN SSSR i Kafedra kolloidnoy khimii Moskovskogo gosudarstvennogo universiteta.

KONTOROVICH, S.I.

Effect of filler disparsity on the hydration solidification of calcium oxide. Dokl. AN SSSR 156 no. 2:434-436 My '64. (MIRA 17:7)

1. Institut fizicheskoy khimii AN SSSR. Predstavleno akademikom P.A.Rebinderom.

KONTOROVICH, S.I.; SEGALOVA, Ye.Ye.; REBINDER, P.A., akademik

Effect of strong electrolytes on the rate of hydration of calcium oxide. Dokl. AN SSSR 157 no. 2:400-403 Jl '64. (MIRA 17:7)

1. Kafedra kolloidnoy khimii Moskovskogo gosudarstvennogo universiteta imeni Lomonosova i Institut fizicheskoy khimii AN SSSR.

KONTOROVICH, S.O., inzhener (Leningrad)

Mobile apparatus for manufacturing porous clay filler and wall slabs. Strei.pred.neft.prom.1 no.5:10-12 Jl '56. (MLRA 9:9)
(Building machinery)

AL'TMAN, A.M., inzh.; KONTOROVICH, S.O., inzh.; LEYMAN, P.P., inzh.

Trailer houses for pipeline construction workers. Stroi.truboprov. 3 no.9:20-22 S '58. (MIRA 11:12)

(Labor and laboring classes--Dwellings)
(Automobiles--Trailers)

SOV/123-59-16-65532

Translation from: Referativnyy zhurnal. Mashinostroyeniye, 1959, Nr 16, p 266 (USSR)

AUTHORS: Apartsev, A.S., Kann, A.V., Kontorovich, S.O., Leyman, P.P.

TITLE: A New Technology of Constructing Delivery Pipelines of Semi-Metallic Ferro-Concrete Tubes

PERIODICAL: Str-vo truboprovodov, 1958, Nr 11, 13 - 16

ABSTRACT: The economic and operational superiority of employing semi-metallic tubes (T) is stated, consisting of an outer pre-strained reinforced concrete shell and a thin-walled metallic inner sleeve, which increases the service life of the T. The Leningrad "Barrikady" Plant finished the tests with a pilot KZhB-67 machine for the manufacture of pressureless reinforced concrete T of 900 mm in diameter directly in the ditch. The technology of constructing delivery pipelines, worked out by the State Institute for the Designing of Special Enterprises for the Gas Industry "Giprospetsgaz", of semi-metallic T by the method of continuous molding is described. The expediency of applying shells of pre-strained reinforced

Card 1/2

SOV/123-59-16-65532

A New Technology of Constructing Delivery Pipelines of Semi-Metallic Ferro-Concrete Tubes

concrete on the sleeve by way of continuous molding on the spot of installation of the pipeline, which facilitates the butt joining of the T and increases the reliability of service, is pointed out. 4 figures, 5 references.

Sh.T.I.

Card 2/2

14(5)

SOV/95-59-3-3/14

AUTHORS: Al'tman, A.M., Kontorovich, S.O., Leyman, P.P., Engineers

TITLE: Mobile Production Centers on Pipeline Tracks
(Peredvizhnyye proizvodstvennyye bazy na trassakh)

PERIODICAL: Stroitel'stvo truboprovodov, 1959, Nr 3, pp 5-10 (USSR)

ABSTRACT: The vast production program of the 7-Year Plan has rendered necessary the establishment of field production centers which should be in a position to provide living accommodations, workshops, and stores for supplies and material required on the construction sites by the working teams. The task of setting up these centers, or service stations, is complicated by the conditions under which they have to function. Located often in remote areas, far from any industrial centers, RR lines or highways, they are intended for temporary stay only, being called upon to move along the track as construction is progressing. Giprospetsgaz has worked out a project pertaining to complete typical production centers which answer all the requirements of the pipeline construction and can be erected or dismantled in 10-15 days. The general layout of a production center is shown on diagram 1 as consisting of

Card 1/3

3 main sections: construction area, motor pool for 50 automobiles and stores for fuel and lubricating oils. Table 1 and 2 give a breakdown of the field production center by departments or units, indicating their capacity and kind of constructions. The center is composed of 31 buildings. As a rule all constructions are made for assembling and dismantling on the spot for ready transportation. Typical centers make it possible to organize production from locally available raw material and construction material; they can produce sections of electrotechnical, sanitary, and technological installations and perform maintenance and repair jobs on automobiles and machines; they also act as distributors of fuel, oil, and such materials as they receive for storage. The rest of the article deals with typical buildings assembled from prefabricated parts and panels, made of metal and wood. Dismantled constructions and equipment can be loaded on trucks and trailers, or on RR platforms for transportation. A production center needs about 4,500 m^2 of open space for putting

KONTOROVICH, S.O., inzh.; KANN, A.V., inzh.

Using conveying units in making wall blocks in a prefabricated-house combine. Biul.tekh.inform.po stroi. 5 no.9:1-4 S '59. (MIRA 12:12)

(Leningrad--Wall blocks) (Conveying machinery)

KANN, A.V., inzh.; KONTOROVICH, S.O., inzh.

Conveying lines for making keramzit-concrete wall slabs. Stroi. mat. 6 no.3:4-7 Mr '60. (MIRA 13:6)
(Leningrad--Concrete slabs)

KONTOROVICH, S.O.

Structural elements made with polymer materials. Stroi. truboprov. 8 no.3:24-25 Mr '63. (MIRA 16:5)

1. Nachal'nik otdela stroitel'noy promyshlennosti Giprospetsgaza, Leningrad.

(Polymers) (Building materials)

KONTOROVICH, S.O.

Standardization of elements and the grouping of structures in oil fields. Stroi.truboprov. 10 no.10:21-22 O '65. (MIRA 18:10)

1. Giprospetsgaz, Leningrad.

KONTOROVICH, V

Ekonomika, organizatsiya i planirovaniye promyshlennogo predpriyatiya (by) S. Kamenitser, V. Kontorovich (i) G. Pishchulin. Izd. 2., perer. i dop. Moskva, Gospolitizdat, 1961.
711 p. charts, tables.
Bibliography: p. 695-702.

KONTOROVICH, V.

[Technical, industrial and financial plan in industrial enterprises; methods of development] Tekhpromfinplan promyshlennogo predpriiatiia; metodika razrabotki. Izd.2., ispr. i dop. [Moskva] Gos. izd-vo polit. lit-ry, 1953. 402 p. (MLRA 7:3)
(Russia--Industries)

KONTOROVICH, VENIAMIN GAMSHEYEVICH

Tekhniko-Ekonomicheskoye Planirovaniye Na Promyshlennom Predpriyatii; Metodika I Raschety. Moskva, Gos. Izd-vo Polit. Lit-ry, 1955. 367 p. forms, tables 23 cm.

KONTOROVICH, V.

733.35
.K81

Der Betriebsplan Des Industriebetriebes. Berlin, Die Wirtschaft, 1955.
439 P. Tables.
Translation From the Russian: Tekhpromfinplan Promyshlennogo Predpriyatiya, Moscow, 1953.

KAMENITSER, S.; KONTOROVICH, V.; PISHCHULIN, G.

Economics

Subject and content of the science of economics and the organization of socialist industrial enterprises, Vop. ekon. No. 2, 1953.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

KONTOROVICH, V.

"The plan of technical development of industrial enterprises; chapter 4 from the book The Technical Production and Financial Plan of Industrial Enterprises. Tr. from the Russian." p. 5 TOBBTERMELES. Vol. 7, no. 10, Oct. 1953, Budapest, Hungry.

SO: Monthly List of the East European Accessions, LC, Vol. 3, no. 4, April 1954

KONTOROVICH, Veniamin Ganshcyevich; POGORELOVA, V., redaktor; DANILINA, A., tekhnicheskiy redaktor.

[Technical and economic planning in industrial enterprises; methods and calculations] Tekhniko-ekonomicheskoe planirovanie na promyshlennom predpriatii; metodika i raschety. Moskva, Gos.izd-vo polit. lit-ry, 1955. 367 p. (MLRA 9:4)

(Industrial organization)

KONTOROVICH, V.

Establishing labor productivity indices in industry. Sots.trud. no.1:48-54 Ja '57. (MLRA 10:4)
(Labor productivity)

KAMENITSER, S.Ye.; KONTOROVICH, V.; PISHCHULIN, G.; PISKUNOV, V., red.; TROYANOVSKAYA, N., tekhn.red.

[Economics, organization and planning of industrial enterprises; a textbook] Ekonomika, organizatsiia i planirovanie promyshlennogo predpriiatiia; uchebnoe posobie. Moskva, Gos.izd-vo polit. lit-ry, 1958. 503 p. (MIRA 11:12)
(Industrial management)

25(5) PHASE I BOOK EXPLOITATION SOV/2581

Veselkov, F. S., Yu. A. Gaydukov, S. Ye. Kamenitser; /Chief/, V. G. Kontorovich, G. A. Pishchulin, A.M. Savkin, A.S. Tolstykh, and A.S. Fastovskiy

Ravnomernaya rabota mashinostroitel'nykh zavodov (Uniform Work of Machine-Manufacturing Plants) Moscow, Mashgiz, 1958. 171 p. Errata slip inserted. 4,000 copies printed.

Reviewer: A. K. Bondarenko, Engineer; Ed.: V. A. Letenko, Candidate of Economic Sciences; Tech. Ed.: V. D. El'kind; Managing Ed. for Literature on the Economics and Organization of Production (Mashgiz): T. D. Saksaganskiy.

PURPOSE: This book is intended for engineering and technical personnel in machine-manufacturing plants

COVERAGE: This book discusses the national economic importance of uniform operation of plants according to a schedule, and points out planning problems that should be solved to permit work uniformity in manufacturing establishments. It defines organizational and technical prerequisites for uniform work, shows the in-

Card 1/5

fluence of financial agencies of establishments on production uniformity, and describes methods of measuring work uniformity. The last two chapters are devoted to work practices at the Moscow "Elektroschetchik" Plant and the Pervyy Moskovskiy chasovoy zavod (First Moscow Watch and Clock Plant). No personalities are mentioned. There are no references.

TABLE OF CONTENTS:

KONTOROVICH, V. G.

(1) Kamenitser, Solomon Yefremovich, Ekonomika, Organizatsiya I Planirovaniye Promyshlennogo Predpriyatiya;Uchebnoye Posobiye. Economics, organization and Planning of Industrial Enterprise, By S. Ye. Kamenitser,

G. A . Pishchulin Moskva, Gospolitizdat, 1958. Bibliography P. 495-500
503 P. Diagrs., Graphs, Tables.

KONTOROVICH, V S.

ABRAMOV, V.A.; ALEKSEYEV, A.M.; AL'TER, L.B.; ARAKELYAN, A.A.; BAKLANOV, G.I.; BASOVA, I.A.; BLYUMIN, I.G.; BOGOMOLOV, O.T.; BOR, M.Z.; BREGEL', E.Ya.; VEYTSMAN, N.R.; VIKENT'YEV, A.I.; GAL'TSOV, A.D.; GERTSOVSKAYA, B.R.; GLADKOV, I.A.; DVORKIN, I.N.; DRAGILEV, M.S.; YEFIMOV, A.N.; ZHAMIN, V.A.; ZHUK, I.N.; ZAMYATNIN, V.N.; IGNAT'YEV, D.I.; IL'IN, M.A.; IL'IN, S.S.; IOFFE, Ye.A.; KAYE, V.A.; KAMENITSER, S.Ye.; KATS, A.I.; KLIMOV, A.G.; KOZLOV, G.A.; KOLGANOV, M.V.; KONTOROVICH, V.G.; KRAYEV, M.A.; KRONROD, Ya.A.; LAKHMAN, I.L.; LIVANSKAYA, F.V.; LOGOVINSKAYA, R.L.; LYUBOSHITS, L.I.; MALYSH, A.I.; MENZHINSKIY, Ye.A.; MIKHAYLOVA, P.Ya.; MOISEYEV, M.I.; MOSKVIN, P.M.; NOTKIN, A.I.; PARTIGUL, S.P.; PERVUSHIN, S.P.; PETROV, A.I.; PETRUSHOV, A.M.; PODGORNOVA, V.M.; RABINOVICH, M.A.; RYVKIN, S.S.; RYNDINA, M.N.; SAKSAGANSKIY, T.D.; SAMSONOV, L.N.; SMEKHOV, B.M.; SOKOLIKHIN, S.I.; SOLLERTINSKAYA, Ye.I.; SUDARIKOV, A.A.; TATAR, S.K.; TERENT'YEV, P.V.; TYAGAY, Ye.Ya.; FEYGIN, Ya.G.; FIGURNOV, P.K.; FRUMKIN, A.B.; TSYRLIN, L.M.; SHAMBERG, V.M.; SHAPIRO, A.I.; SHCHENKOV, S.A.; EYDEL'MAN, B.I.; EKHIN, P.E.; MITROFANOVA, S., red.; TROYANOVSKAYA, N., tekhn.red.

[Concise dictionary of economics] Kratkii ekonomicheskii slovar'. Moskva, Gos.izd-vo polit.lit-ry, 1958. 391 p. (MIRA 11:7)
(Economics--Dictionaries)

KAMENITSER, Solomon Yefremovich; KONTOROVICH, Veniamin Gamsheyevich; PISHCHULIN, Grigoriy Akimovich; PISKUNOV, V., red.; TROYANOVSKAYA, N., tekhn.red.

[Economics, organization, and planning of an industrial enterprise] Ekonomika, organizatsiia i planirovanie promyshlennogo predpriiatiia. Izd.2., perer. i dop. Moskva, Gos.izd-vo polit.lit-ry, 1961. 711 p.
(Industrial management)

KAMENITSER, Solomon Yefremovich; KONTOROVICH, V.G.; PISHCHULIN, G.A.; AVETISYAN, Ye., red.; TROYANOVSKAYA, N., tekhn. red.

[Organization and planning of an industrial enterprise] Organizatsiia i planirovanie promyshlennogo predpriiatiia; uchebnik. 3., perer. i dop. izd. Moskva, Gospolitizdat, 1963. 606 p. (MIRA 16:12)
(Industrial organization)

BIMAN, A.M.; GERSHKOVICH, I.I.; GOLUBTSOV, L.B.; ITIN, L.I.; KAMENITSER, S.Ye.; KONTOROVICH, V.G.; MOROZOV, P.A.; TOLSTYKH, A.S.; SHIMANSKIY, V.P.; SHUVALOV, N.M.; AVETISYAN, Ye., red.

[School of socialist management; a school reader for workers studying the economics of industrial enterprises] Shkola sotsialisticheskogo khoziaistvovaniia; kniga dlia chteniia v shkolakh rabochikh, izuchaiushchikh ekonomiku promyshlennykh predpriiatii. Izd.2., perer.i dop. Moskva, Politizdat, 1964. 318 p. (MIRA 17:8)

ACC NR: AP7008264 SOURCE CODE: UR/0141/67/010/001/0114/0127

AUTHOR: Vigdorchik, V. I.; Kontorovich, V. M.

ORG: Institute of Radiophysics and Electronics, AN UkrSSR (Institut radiofiziki i elektroniki AN UkrSSR)

TITLE: Stationary oscillations of an electron cloud in a cylindrical magnetron

SOURCE: IVUZ. Radiofizika, v. 10, no. 1, 1967, 114-127

TOPIC TAGS: magnetron, microwave component, DISPERSION EQUATION

ABSTRACT: A dispersion equation, previously derived by the authors, for the case of low amplitude oscillations is analyzed to investigate stationary conditions of a magnetron. Stationary conditions and region of steady-state oscillations were determined. It was shown that there is a possibility of oscillation pulling in the region of a precritical magnetic field. The stability of the steady-state regime was investigated and the dependence of the amplitude of stationary oscillation on the magnetic field and the plate voltage was found. The time of instability stabilization is less than that of velocity-electron bunching. All basic formulas are given in an appendix. Orig. art. has: 4 figures and 12 formulas. [GS]

SUB CODE: 09/ SUBM DATE: 18Dec65/ ORIG REF: 006/ OTH REF: 001

Card 1/1 UDC: 621.385.64